

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration (PHMSA)
Office of Contracts and Procurement, PHA-30
400 7th Street, Room 7118
Washington, DC 20590

Commercial Remote Sensing and Spatial Information Technology Applications Program

DTPH56-06-BAA-0002, due August 07, 2006, POC Glen Vierk, Contract Specialist,
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CONTACT INFORMATION: Through this Broad Agency Announcement (BAA), being issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Contracts and Procurement, and on behalf of the Research and Innovative Technology Administration (RITA), the U.S. Department of Transportation (DOT) is soliciting information and descriptions (white papers) for activities to validate initiatives in support of the U.S. DOT Commercial Remote Sensing and Spatial Information (CRS&SI) technology application program for transportation infrastructure development and construction. Interested and eligible submitters may submit separate White papers on one or more of the initiatives described in this announcement. Each White Paper on each initiative must not exceed fifteen (15) pages and must include the offeror's contact information: point of contact, telephone number, fax number and e-mail address. Separate white papers must be submitted for each proposed project/initiative and multiple projects/initiatives cannot be combined into a single White Paper.

SCOPE: A four-year CRS&SI technology application program is authorized in the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5506. The U.S. DOT Research and Innovative Technology Administration (RITA) manages the program.

The program will apply results and the experience gained from a similar program completed under the previous transportation legislation (The Transportation Equity Act for the 21st Century (TEA-21)- Section 5113). The results are available in the U.S. DOT/RITA Remote Sensing Program web pages.
(<http://scitech.dot.gov/research/remote/index.html>).

The SAFETEA-LU program will focus on major national initiatives and validate CRS&SI technology applications and deliver smarter and more efficient methods, processes and services for transportation infrastructure development and construction. The program awards will be competitively selected from consortia teams of university research centers working in partnership with industry and state agencies, and meeting the technical and cost sharing requirements of this announcement.

These initiatives are chosen based on DOT priorities for Commercial Remote Sensing and Spatial Information (CRS&SI) technology applications for user services, that have the potential to produce a high return on investment, in terms of saving cost and

improving the efficiency of infrastructure development and construction. Commercial remote sensing products include remote sensing products from satellites and above ground platforms and from unmanned vehicles. Spatial information technology products include products from Geospatial Information Systems (GIS), Global Positioning Systems (GPS), and related Intelligent Transportation System (ITS) and services. The proposals should focus on CRS&SI technology products (space based technologies) applicable to transportation infrastructure development and construction. A detailed description of each initiative is as follows:

Initiative 1: Transportation Infrastructure Construction and Condition Assessment:

This initiative focuses on validating new methods, tools and systems for cost effectively monitoring the quality of construction and condition of the physical infrastructure. The project deliverables should result in significant cost savings for construction and maintenance of transportation infrastructure. The validation under this initiative must have the following two complementing objectives:

- 1) Develop and validate new applications of CRS&SI technologies for monitoring the quality of infrastructure construction; and
- 2) Apply CRS&SI technology integration and products to monitor the condition of constructed infrastructure systems

The purpose of the initiative is to implement CRS&SI technologies and products for achieving smarter, automated and non-intrusive methods for quality control of infrastructure construction and also develop capabilities for asset management and condition assessment for maintaining the performance and continued serviceability, after construction. The results should lead to longer performing physical infrastructure and significant savings of construction, repair and rehabilitation cost for transportation agencies. The application tools should also contribute to reducing the cost for inventorying and inspecting physical infrastructure systems for asset management.

Initiative 2: Freight Flow Congestion Mitigation:

The initiative focuses on validating new methods, tools and systems for mitigating freight congestion, specifically in urban freight corridors, and increasing the capacity of freight flow through intermodal systems. The validation under this initiative must have the following two complementing objectives:

- 1) Develop and validate CRS&SI technologies for collecting and analyzing data and information for modeling and verifying freight flow congestion from ports into intermodal systems, including urban highways and rail systems; and
- 2) Apply integrated CRS&SI technology tools into a robust space based monitoring system and test the suitability of the system for managing potential congestion pricing options in selected urban corridors.

The purpose of the initiative is to apply CRS&SI technologies to identify critical freight flow bottlenecks, apply the information for modeling congestion and arrive at measures for mitigating freight congestion at ports, urban corridors and gateways including:

- 1) Freight unloading from vessels and congestion at ports;
- 2) Intermodal flow from ports to highway and rail systems;
- 3) Congestion at highway intersections;
- 4) Congestion at and around traffic incidents and highway works zones; and
- 5) Freight flow at critical gateways and border crossings.

The results should lead to application of space-based technology to address and mitigate freight congestion issues, and arrive at counter measures. The findings should also contribute to developing a robust system using space-based technologies and products for monitoring and managing congestion pricing options in a typical urban environment, with minimal ground-based infrastructure requirements.

Initiative 3: Infrastructure Development Planning and Environmental Impact Assessment:

The corridor planning and decision making process is burdened with the high cost of collecting data and the length of time needed for completing environmental and transportation impact assessments. The validation under this initiative must have the following two complementing objectives:

- 1) Validate the application of CRS&SI technologies to collect data and information required to satisfy the National Environmental Policy Act (NEPA) guidelines and for saving cost in preparing Environmental and transportation Impact Assessments; and
- 2) Apply the advances in space-based technology application for increasing the efficiency and shortening the time required to develop multimodal corridor planning options, and transportation relocation in urban areas.

WHITE PAPERS. PHMSA, on behalf of RITA, is soliciting white papers that address one or more of the initiatives outlined in this announcement (see above). A proposal must include a cost sharing contribution of at least one-third (33%) of the proposed project's cost to be considered. Each White Paper must not exceed a total of 15 pages, including any appendices and backup materials and must include sufficient information to determine the probability of achieving the objectives of the initiative and to evaluate the following areas (All evaluation factors are of equal importance):

- 1) Technical concept addressing the initiative;
- 2) Technical approach and plans for validating the concept for transportation application;
- 3) Background of the performing consortia team in related areas of technologies and space based technology application;
- 4) Proposed partnerships between cooperating consortia of university centers, industry and state agencies; and
- 5) Proposed cost and cost sharing contributions to perform the initiative.

EVALUATION AND SELECTION FOR FURTHER CONSIDERATION: A total of approximately \$4.5 million will be made available annually for funding of selected initiatives during Fiscal Years 2006-2009. Based on evaluation of the responses received, the U.S. DOT may select one or more initiatives for awards and may choose to fund selected initiatives through one of a variety of available mechanisms, including Cooperative Agreements. As stated above, a minimum one-third cost sharing is required from proposing consortia teams to perform the initiative. Cost sharing may include direct, indirect and in-kind cost contributions and can be made collectively from the consortia of university research centers, industry and state agencies. Proposed partnerships and cost sharing arrangements need not be finalized for submitting white papers. The period of performance for completing each initiative and delivering results must not exceed 24 months. A panel of federal agency experts will review all white papers received for responsiveness to the evaluation areas stated earlier in this BAA. Each offeror submitting a white paper deemed worthy of further consideration and meeting the criteria of this BAA will be notified with possible suggestions for change in scope and detailed guidelines for submitting a full proposal. The Contracting Officer must give his approval to any discussion held between an offeror and the Government's technical staff after submission of a white paper.

GENERAL INFORMATION: In all correspondence to the PHMSA Office of Contracts and Procurement, please reference the BAA No. DTPH56-06-BAA-0002. One hard copy and one electronic copy of each white paper should be submitted. Hard copies should be submitted via overnight mail (e.g., Federal Express, UPS) to Mr. Glen Vierk, USDOT, Pipeline and Hazardous Materials Safety Administration, ATTN: PHA-30, 400 7th Street, Room 7118, Washington, D.C. 20590. White papers must be received in the above office not later than 5:00 PM, EDT, August 07, 2006. Because of continued security concerns, do not send white papers via regular mail. Electronic copies of the white paper submission are to be sent to Mr. Vierk at glen.vierk@dot.gov. NOTE: All inquiries concerning this announcement shall be directed to Mr. Vierk in the PHMSA Office of Contracts and Procurement, at the e-mail address stated above or telephone: (202) 366-5102.

BROAD AGENCY ANNOUNCEMENT: This FedBizOps notice constitutes the BAA as contemplated by FAR 6.102(d)(2). A formal Request for Proposals (RFP) or other type of solicitation regarding this announcement will not be issued. DOT/RITA and PHMSA encourage the widest participation in this requirement, particularly the involvement with universities and other academic institutions as consortia leads, as well as with corporations, non-profit organizations, small and small disadvantaged businesses, State or local governments, and individuals participating in teaming arrangements with the university research centers. White papers submitted under this BAA will remain property of the Government and will not be returned to the offeror.